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Secondary wake instability of a bridge model and its application in wake control

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Highlights

- Floquet stability analysis was performed to determine the spanwise wavelength of secondary wake instability mode for a bridge.
- Motivated by Floquet mode of the wake, we proposed a 3D spanwise-varying control, passive vortex generators (PVG), to attenuate spanwise vortices.
- The PVG can directly generate streamwise vortex pairs to trigger Mode-A-like instability and suppress the spanwise vortices.

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